

Philip M. Fernbach

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Position

Associate Professor of Marketing, *University of Colorado at Boulder, Leeds School of Business*

Co-director, Center for Research on Consumer Financial Decision-Making, Leeds School of Business, University of Colorado at Boulder

Associate Member, Institute of Cognitive Science, University of Colorado at Boulder

Affiliate, Center for Education on Social Responsibility, Leeds School of Business, University of Colorado at Boulder

Education

Ph.D., Cognitive Science, Brown University, Providence, RI, May 2010.

B.A., Philosophy, magna cum laude, Williams College, Williamstown, MA, June 2001.

Postdoctoral Training

Research Scholar, University of Colorado at Boulder, Leeds School of Business, Center for Research on Consumer Financial Decision-Making, 2011-2012.

Post-Doctoral Research Associate and Lecturer, Department of Cognitive, Linguistic and Psychological Sciences, Brown University, Providence, RI, 2010-2011.

Honors and Awards

Dean's Faculty Fellow, Leeds School of Business, 2023-2026.

Marketing Sciences Institute Scholar, Class of 2023.

Provost's Faculty Achievement Award, University of Colorado, Boulder, 2022.

Andrea and Michael Leeds Faculty Fellowship, 2022-2025.

Kahle Family Award for Outstanding Leeds School Publication of 2018, Awarded to Long, Fernbach and De Langhe (2018). Circle of Incompetence: Sense of Understanding as an Improper Guide to Investment Risk.

Association for Consumer Research Early Career Award for Contributions to Consumer

Research, 2018.

Journal of Consumer Research, Best Article Award for best paper published in the journal in 2015. Awarded to Fernbach, Kan & Lynch (2015). Squeezed: Coping with constraint through efficiency and prioritization. Presented in October 2018.

Provost's Faculty Achievement Award, University of Colorado, Boulder, 2018.

Marketing Science Institute award #4000199, 2017, "Consumer Perceptions of Brand Simplicity and Risk" (**\$3,000**, With Nick Light)

Kahle Family Award for Outstanding Leeds School Publication of 2016. Awarded to De Langhe, Fernbach & Lichtenstein (2016). Navigating by the Stars: Investigating the actual and perceived validity of online user ratings.

Marketing Sciences Institute Research Accelerator Award, 2017 (**\$1,500**, with Christina Kan and John Lynch).

Intellectual Humility in Public Discourse Project research grant, 2017-2019, "The Cognitive Basis of Extremism." (**\$165,000**, with Steve Sloman)

Marketing Science Institute Young Scholar, 2017.

Varieties of Understanding Project research grant, 2014-2016, "The interplay of Subjective and Objective Understanding in Financial Decision-Making." (**\$187,017**, With Bart De Langhe and J.D. Trout)

Frascona Excellence in Teaching Award Nomination; Leeds School of Business; 2014, 2016, 2017, 2018.

Templeton Foundation and Thrive Center for Human Development research grant; The Science of Intellectual Humility Project, 2013-2015, "Opening minds by exposing the illusion of understanding." (**\$269,850**; With Steve Sloman, Todd Rogers and Craig Fox)

Sterling-Rice Research Grant, 2013, "Interventions to facilitate open-mindedness." (**\$2,500**)

Marketing Science Institute award #4-1752, 2012, "Retail lighting and consumer decision-making." (**\$7,719**, With Julie Schiro and Pete McGraw)

Sterling-Rice Research Grant, 2012, "Modes of Thinking and Causal Reasoning About Products." (**\$2,500**)

Unilever Corporation, Post-Doctoral Research Grant, 2010-2011, "Designing Consumer Products to Cue Causal Reasoning." (**\$202,000**, with Steve Sloman)

Decision Analysis Society Student Paper Award, Finalist, 2011. "When good evidence goes bad: The weak evidence effect in judgment and decision-making."

American Psychological Association Dissertation Research Award (Top 5 in Competition), 2009, "Understanding predictive and diagnostic reasoning."

Galner Dissertation Fellowship, Brown University, 2009-2010.

Graduate Summer School: Probabilistic Models of Cognition: The Mathematics of Mind, UCLA Institute for Pure and Applied Mathematics, Funded Participant, 2007.

Cognitive Science Society Student Travel Award, 2007, 2009.

Brown University Graduate Fellowship, 2005-2006.

Book

Sloman S. A. & Fernbach, P. M. (2017). *The Knowledge Illusion: Why We Never Think Alone*. Riverhead Books: New York.

Journal Articles

*equal authorship

Light, N. & Fernbach, P.M. (in press). Keep it Simple? Consumer Perceptions of Brand Simplicity and Risk. *Journal of Marketing Research*.

Lynch, J.G., Fernbach, P.M. & Kan, C. (2023). Auditing the Value of Empirical Audits. *Proceedings of the National Academy of Sciences*.

Fernbach, P. M. & Bogard, J. E. (2023). Conspiracy Theory as Individual and Group Behavior: Observations from the Flat Earth International Conference. *Topics in Cognitive Science*.

Light, N., Fernbach, P.M., Rabb, N., Geana, M.V. & Sloman, S.A. (2022). Knowledge overconfidence is associated with anti-consensus views on controversial scientific issues. *Science Advances*. 8 (29) 1-10.

Garcia, C. A., et al. (2022). Strategy games to improve environmental policymaking. *Nature Sustainability*, 5, 464-471.

Walters, D. J. & Fernbach, P. M. (2021). Investor memory of past performance is positively biased and associated with overconfidence. *Proceedings of the National Academy of Sciences*, 118 (36).

Reinholtz, N., Fernbach, P. M. and De Langhe, B. (2021). Do people understand the benefit of diversification? *Management Science*, 67 (12), 7322-7343.

Fernbach, P. M. & Van Boven, L. (2021). False polarization: Cognitive mechanisms and potential solutions. *Current Opinion in Psychology*, 43, 1-6.

Waeber, P. O. et al. (2021). Choices we make in time of crisis. *Sustainability*, 13 (6), 3578.

Fernbach, P. M. & Light, N. (2020). Knowledge is shared. *Psychological Inquiry*, 31 (1), 26-28. (commentary on target article by Clark and Winegard).

De Langhe, B. & Fernbach, P. M. (2019) The dangers of categorical thinking. *Harvard Business Review*, 97 (5), 80-91.

Rabb, N., Fernbach, P.M. & Sloman, S.A. (2019). Individual representation in a community of knowledge. *Trends in Cognitive Sciences*, 23 (10), 891-902.

Fernbach, P.M., Light, N., Scott, S.E., Inbar, Y. & Rozin, P. (2019). Extreme opponents of genetically modified foods know the least but think they know the most. *Nature Human Behaviour*, 3, 251-256.

Li, M., Colby, H. & Fernbach, P. M. (2019). Efficiency for lives, equality for everything else:

- How allocation preference shifts across domains. *Social Psychological and Personality Science*. 10 (5), 697-707.
- Long, A., Fernbach, P. M.* & De Langhe, B.* (2018). Circle of Incompetence: Sense of Understanding as an Improper Guide to Investment Risk. *Journal of Marketing Research*, 55 (4), 474-488.
- Sloman, S. A. & Fernbach, P. M. (2018). Reasoning as Collaboration. *The American Journal of Psychology*, 131 (4), 493-496. (Book Review of Mercier and Sperber's *The Enigma of Reason*).
- Walters, D. J., Fernbach, P. M., Fox, C. R. & Sloman, S. A. (2017). Known unknowns: A critical determinant of confidence and calibration. *Management Science*, 63 (12), 4298-4307.
- De Langhe, B.*, Fernbach, P. M.* & Lichtenstein, D. R.* (2016). Navigating by the stars: Investigating the actual and perceived validity of online user ratings. *Journal of Consumer Research*, 42, 817-833. (Lead Article)
- De Langhe, B.*, Fernbach, P. M.* & Lichtenstein, D. R.* (2016). Star Wars: Response to Simonson, Winer/Fader and Kozinets. *Journal of Consumer Research*, 42, 850-857. (Response to commentaries on DFL 2016)
- Fernbach, P. M., Kan, C. & Lynch J. G. Jr. (2015). Squeezed: Coping with constraint through efficiency and prioritization. *Journal of Consumer Research*, 41 (5), 1204-1227. (Winner of 2018 Journal of Consumer Research Best Article Award)
- McGraw, P. A., Schiro, J. L. & Fernbach, P. M. (2015). Not a problem: A downside of humorous appeals. *Journal of Marketing Behavior*, 1 (2), 187-208.
- Fernbach, P. M., Hagmayer, Y. & Sloman, S. A. (2014). Effort denial in self-deception. *Organizational Behavior and Human Decision Processes*, 123 (1), 1-8.
- Fernbach, P. M., Sloman, S. A., St. Louis, R. & Shube, J. N. (2013). Explanation fiends and foes: How mechanistic detail determines understanding and preference. *Journal of Consumer Research*, 39 (5), 1115-1131.
- Fernbach, P. M., Rogers, T., Fox, C. R. & Sloman, S. A. (2013). Political extremism is supported by an illusion of understanding. *Psychological Science*, 24 (6), 939-946.
- Fernbach, P. M. & Erb, C. D. (2013). A quantitative causal model theory of conditional reasoning. *Journal of Experimental Psychology: Learning, Memory & Cognition*, 39 (5), 1327-1343.
- Fernbach P. M. & Rehder, B. (2013). Cognitive shortcuts in causal inference. *Argument & Computation*, 4 (1), 64-88.
- Sloman, S. A., Fernbach, P. M. & Ewing, S. (2012). A causal model of intentionality judgment. *Mind & Language*, 27 (2), 154-180.
- Fernbach, P. M., Macris, D. M. & Sobel, D. M. (2012). Which one made it go? The emergence of diagnostic reasoning in preschoolers. *Cognitive Development*, 27 (1), 39-53.

- Fernbach, P. M., Darlow A. & Sloman, S. A. (2011). When good evidence goes bad: The weak evidence effect in judgment and decision-making. *Cognition*, 119, 459-467. (Decision Analysis Society Student Paper Award, Finalist)
- Fernbach, P. M., Darlow A. & Sloman, S. A. (2011). Asymmetries in predictive and diagnostic reasoning. *Journal of Experimental Psychology: General*, 140 (2), 168-185.
- Fernbach, P. M. & Sloman, S. A. (2011). Don't throw out the Bayes with the bathwater. *Behavioral and Brain Sciences*, 34 (4), 198-199. (Commentary on target article by Jones and Love)
- Swirsky, C., L., Fernbach, P. M. & Sloman, S. A. (2011). An illusion of control modulates the reluctance to tempt fate. *Judgment and Decision Making*, 6 (7), 688-696.
- Sloman, S. A. & Fernbach, P. M. (2011). Human representation and reasoning about complex causal systems. *Information, Knowledge, Systems Management*, 10, 1-15. (Reprinted In W. B. Rouse, K. R. Boff & P. Sanderson (Eds.) *Complex socio-technical systems: Understanding and influencing causality of change*. Amsterdam, NED: IOS Press.)
- Fernbach, P. M., Darlow A. & Sloman, S. A. (2010). Neglect of alternative causes in predictive but not diagnostic reasoning. *Psychological Science*, 21 (3), 329-336.
- Sloman, S. A., Fernbach, P. M. & Hagmayer, Y. (2010). Self-deception requires vagueness. *Cognition*, 115 (2), 268-281.
- Fernbach, P. M. & Sloman, S. A. (2009). Causal learning with local computations. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 35 (3), 678-693.

Book Chapters

- Light, N. and Fernbach, P. M. (2020), "The Role of Knowledge Calibration in Intellectual Humility," in *The Routledge Handbook of Philosophy of Humility*, ed. Alessandra Tanesini, Michael Patrick Lynch, and Mark Alfano.
- Hagmayer, Y. & Fernbach P. M. (2016). Causality in Decision Making. In M. Waldmann (Ed.) *Oxford Handbook of Causal Reasoning*. Oxford, UK, Oxford University Press.
- Sloman, S. A., Fernbach, P. M. & Ewing, S. (2009). Causal models: The representational infrastructure for moral judgment. In D. Bartels, C. W. Bauman, L. J. Skitka, & D. Medin (Eds.) *Moral judgment and decision-making: The psychology of learning and motivation (Vol. 50)*. San Diego, CA: Elsevier.
- Sloman, S. A. & Fernbach, P. M. (2008). The value of rational analysis: An assessment of causal reasoning and learning. In Chater, N. & Oaksford, M. (Eds.). *The probabilistic mind: Prospects for rational models of cognition*. Oxford: Oxford University Press.

Popular Press Articles

- Philip Fernbach and Daniel Walters, Why are investors so cocky? "They often have a biased memory – and selectively forget their money-losing stocks." *The Conversation*, November 2, 2021.

Philip Fernbach and Daniel Walters, "Keep losing money on cryptos and meme stocks? Investors can't trust their memory, new research shows." MarketWatch, September 7, 2021.

Philip Fernbach and Abigail Sussman, "Teaching people about money doesn't seem to make them any smarter about money – here's what might." MarketWatch, October 10, 2018.

Andrew Long, Philip Fernbach and Bart De Langhe, "The idea of 'investing in what you know' is more dangerous than you think." MarketWatch, July 18, 2018.

Philip Fernbach and Steven Sloman, "Why We Believe Obvious Untruths." New York Times, March 3, 2017.

Philip Fernbach, "We Should be Asking More Stupid Questions." LinkedIn Pulse, May 6, 2017.

Philip Fernbach and Steven Sloman, "Cognitive science shows that humans are smarter as a group than they are on their own." Quartz, April 18, 2017.

Bart de Langhe, Philip Fernbach and Donald R. Lichtenstein, "High Online User Ratings Don't Actually Mean You're Getting a Quality Product." Harvard Business Review, July 4th, 2016.

Steven Sloman and Philip Fernbach, "I'm Right (For Some Reason). Why Partisans Can't Explain Their Views." New York Times, October 21, 2012.

Refereed Conference Proceedings Papers

Fernbach, P. M. & Darlow, A. (2010). Causal conditional reasoning and conditional likelihood. In S. Ohlsson & R. Catrambone (Eds.). *Proceedings of the 32nd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Fernbach, P. M. & Darlow, A. (2009). Causal asymmetry in inductive judgments. In N. A. Taatgen & H. van Rijn (Eds.). *Proceedings of the 31st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Fernbach, P. M., Linson-Gentry, P & Sloman, S. A. (2007). Causal beliefs influence the perception of temporal order. In D. S. McNamara & J. G. Trafton (Eds.). *Proceedings of the 29th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Fernbach, P. M. (2006). Sampling assumptions and the size principle in property induction. In R. Sun & N. Miyake (Eds.). *Proceedings of the 28th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Invited Seminars and Talks

University of Texas at Austin, McCombs School of Business, November 2023.

Gold Lab Symposium, Boulder, Colorado, May 2023.

Erasmus University, Rotterdam School of Management and Erasmus School of Economics, Rotterdam, Netherlands, April 2023.

United States Airforce Academy, Colorado Springs, CO, April 2023.

Massachusetts Institute of Technology, Sloan School of Management, Boston, MA, February

2022.

University of Colorado Denver, Anschutz Medical Campus, Denver, CO, February 2021.
Kellogg School of Management, Evanston, IL, November 2020.
Columbia University, Columbia Business School, New York, NY, March 2019.
New York University, Stern School of Business, New York, NY, March 2019.
CU on the Weekend, Boulder, CO, November, 2018.
Environmental Protection Agency, Denver, CO, October 2018.
IDC Herzliya, Arison School of Business, Herzliya, Israel, June 2018.
UCSD Rady School of Management, San Diego, CA, May 2018.
Conference on World Affairs, University of Colorado, Boulder, CO, April 2018.
Leeds Business Insights, Los Angeles, CA, April 2018.
Leeds Spring Board Meeting, Denver, CO, April 2018.
University of Michigan, Institute for Social Research, Ann Arbor, MI, March 2018.
Cornell University, Center for Behavioral Economics and Decision Research, Ithaca, NY,
February 2018.
United States Military Academy, Modern War Institute, West Point, NY, February 2018.
Keynote Address: Graduate Teacher Program Conference, University of Colorado, Boulder,
CO, January 2018.
Leeds Business Insights, Denver, CO, November 2017.
United States Airforce Academy, Colorado Springs, CO, October 2017.
Colorado College, Economics and Business Department, Colorado Springs, CO, October
2017.
New York Times Athens Democracy Forum, Athens, Greece, September 2017.
Ted_x Mile High, Denver, CO, July 2017.
UCLA Anderson School of Management, Los Angeles, CA, February 2017.
Duke University Fuqua School of Business, Durham, NC, November 2016.
Erasmus University, Rotterdam School of Management and Erasmus School of Economics,
Rotterdam, Netherlands, May 2016.
University of Texas at Austin, McCombs School of Business, February 2016.
London Business School, London, England, September 2015.
University of Pennsylvania, The Wharton School, Philadelphia, PA, April 2015.
Yale University School of Management, New Haven, CT, November 2014.
University of Southern California Marshall School of Business, Los Angeles, CA, May 2014.
Carnegie Mellon University Tepper School of Business, Pittsburgh, PA, February 2014.
CIRES Center for Science and Technology Policy Research, University of Colorado, Boulder,
CO, December 2013.
TED_x Golden Gate Park, San Francisco, CA, October 2013.
Brown University Department of Cognitive, Linguistic and Psychological Sciences,
Providence, RI, August 2013.

Stanford University Graduate School of Business, Stanford, CA, April 2013.

University of Florida Warrington School of Business Administration, Gainesville, FL, February, 2013.

University of Michigan Ross School of Business, Ann Arbor, MI, January, 2013.

University of Pennsylvania, The Wharton School, Philadelphia, PA, November 2012.

University of Colorado at Boulder, Leeds School of Business, Boulder, CO, April 2011.

University of Pittsburgh, Pittsburgh, PA, February 2011.

Yale University, New Haven CT, December 2011.

Unilever Research and Development, Port Sunlight, United Kingdom, November 2010.

Applied Biomathematics, Setauket, NY, June 2010.

Teaching

Instructor:

University of Colorado:

Marketing Research and Analytics (MKTG 3350; Undergraduate Level), Spring 2013-2019

Customer Analytics (MSBX 5310, Masters Level): Spring 2015-2016, Fall 2018

Customer Analytics (MKTG 3050, Undergraduate Level): 2017-present

Consumer Decision-Making: Behavioral Economics, Judgment and Decision-Making and Experimental Design (MBAX 6380, 6381, Masters Level): 2021-present

Brown University:

Thinking (Fall 2010; advanced seminar in high-level cognition)

Teaching Assistant (Brown University):

Music and the Mind, Quantitative Methods in Psychology, Thinking, Introduction to Cognitive Science, Laboratory in Cognitive Processes

Service

Editorial Review Board: *Journal of Consumer Research*

Ad hoc reviewer for:

Argument & Computation, Child Development, Cognition, Cognitive Development, Cognitive Processing, Cognitive Psychology, Cognitive Science, European Journal of Cognitive Psychology, Experimental Brain Research, Frontiers in Cognitive Science, Journal of Behavioral Decision Making, Journal of the Academy of Marketing Science, Journal of Consumer Research, Journal of Experimental Psychology: General, Journal of Experimental Psychology: Learning, Memory, and Cognition, Journal of Experimental Social Psychology, Journal of Marketing Research, Journal of Personality and Social Psychology, Journal of Problem Solving, Management Science, Marketing Science, Memory & Cognition, Mind, Nature Climate Change, Nature Human Behaviour, Organizational Behavior and Human Decision Processes, Perspectives on Psychological Science, PLOS One, Proceedings of the National Academy of Sciences, Psychological Bulletin, Psychological Review,

Psychological Science, Psychonomic Bulletin & Review, Public Opinion Quarterly, Quarterly Journal of Experimental Psychology, Thinking & Reasoning, Topics in Cognitive Science

Conference Reviewing:

Society for Judgment and Decision-Making Annual Conference
Society for Consumer Psychology Annual Conference
Association for Consumer Research Annual Conference
Society for Philosophy and Psychology
Behavioral Decision Research in Management Conference
La Londe Consumer Behavior Conference
Boulder Summer Conference on Consumer Financial Decision-Making
Conference of the Cognitive Science Society
Conference of the Eastern Psychological Association
European Cognitive Science Conference

Grant Reviewing:

National Science Foundation
Israel Science Foundation
Research Grants Council of Hong Kong
Time-sharing Experiments for the Social Sciences (TESS)

Competition Reviewing:

Marketing Sciences Institute Alden G. Clayton Doctoral Dissertation Proposal Competition, 2017
Decision Analysis Society Student Paper Award, 2012

Conference Organization:

Planning committee: Behavioral Decision Research in Management Conference (BDRM), 2012
Conference Chair: Boulder Summer Conference on Consumer Financial Decision Making, (2018-2021)

Dissertation Committees

Christina Kan (2015)
Julie Schiro (2016)
Dan Walters (UCLA; 2017)
Laura Michaelson (Psychology; 2017)
Kellen Mrkva (Psychology; 2018)
Lauren Min (2018)
Andrew Long (chair; 2018)
Erin McPherson (Psychology; 2018)
Justin Pomerance (2020)
Joseph Harvey (chair; 2020)
Nicholas Light (chair; 2021)
Shane Littrell (Waterloo, external examiner; 2021)

Selected Media Coverage

ABC News

The Financial Times

The Observer

The Atlantic	Forbes	Pacific Standard
BBC	Foreign Policy	Politico
Bloomberg	Fox Business	Psychology Today
The Boston Globe	The Huffington Post	Quartz
CBC	Il Corriere Della Sera	Reason Magazine
Christian Science Monitor	Inc	Scientific American
Chronicle of Higher Ed	The Independent	Slate
CSPAN	Marketwatch	Sky News
The Daily Mail	Mindful Magazine	Time Magazine
The Denver Post	Money Magazine	The Toronto Sun
Der Spiegel	National Geographic	Vice News
Discover Magazine	National Public Radio	Vox
Discovery News	Nautil.us	The Wall Street Journal
The Economist	New York Magazine	The Washington Post
El Pais	The New York Times	Wired
Fast Company	The New Yorker	Yahoo Finance

Industry Experience

Employment

2003-2005, Analyst, Auctive Incorporated, Boston, MA: Strategy consulting, consumer packaged goods industry; Clients include Campbell's Soup, Coors Brewing, Nestle Waters, Diageo.

2002-2003, Research Analyst, Dove Consulting, Boston, MA: Strategy and management consulting (beverage and food, consumer broadband and financial services industries).